# United States Patent [19]

**Ruoff, Jr.**

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[54] **RETINALLY STABILIZED DIFFERENTIAL RESOLUTION TELEVISION DISPLAY**


[75] Inventor: **Carl F. Ruoff, Jr.**, La Crescenta, Calif.

[73] Assignee: **The United States of America as represented by the Administrator of the National Aeronautics and Space Administration**, Washington, D.C.



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[52] **U.S. Cl.** ..... **358/133**; 358/109

[58] **Field of Search** ..... 358/109, 133, 93, 108, 358/137, 138, 166, 180



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*Primary Examiner*—Michael A. Masinick
*Assistant Examiner*—Edward L. Coles
*Attorney, Agent, or Firm*—Paul F. McCaul; John R. Manning; Thomas H. Jones



[57] **ABSTRACT**

A remote television viewing system employing an eye tracker is disclosed, wherein a small region of the image appears in high resolution, and the remainder of the image appears in low resolution. The eye tracker monitors the position of the viewer's line of sight. The eye tracker position data is transmitted to the remote television camera and control. Both the remote camera and television display are adapted to have selectable high-resolution and low-resolution raster scan modes. The position data from the eye tracker is used to determine the point at which the high-resolution scan is to commence. The video data defining the observed image is encoded in a novel format, wherein in each data field, the data representing the position of the high-resolution region of predetermined size appears first, followed by the high-resolution zone video data and then the low-resolution region data. As the viewer's line of sight relative to the displayed image changes, the position of the high-resolution region changes to track the viewer's line of sight.


**12 Claims, 6 Drawing Figures**